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LEAF SPOT AND TIP BURH OF PHILODEHDROH OXYCARDIUM

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Greenhouse-grown Philodendron oxycardium Schott (P. cordatum Kunth) suffers each year from a leaf spot and tip burn which spoils the appearance of the plants and renders them largely unsalable,

SYMPTOMS. The spots begin on the leaf blade as small, water-soaked dots, which gradually turn yellow and enlarge into irregular, elongated blotches. Older spots often show a light or dark brown center surrounded by a yellow margin of affected leaf tissue (Fig. 1). Along the leaf margin toward the leaf tip a narrow strip of brown necrotic tissue is usually present. This symptom is very characteristic of the disease and for this reason the disease is often called tip burn, although the leaf blade itself is also affected.

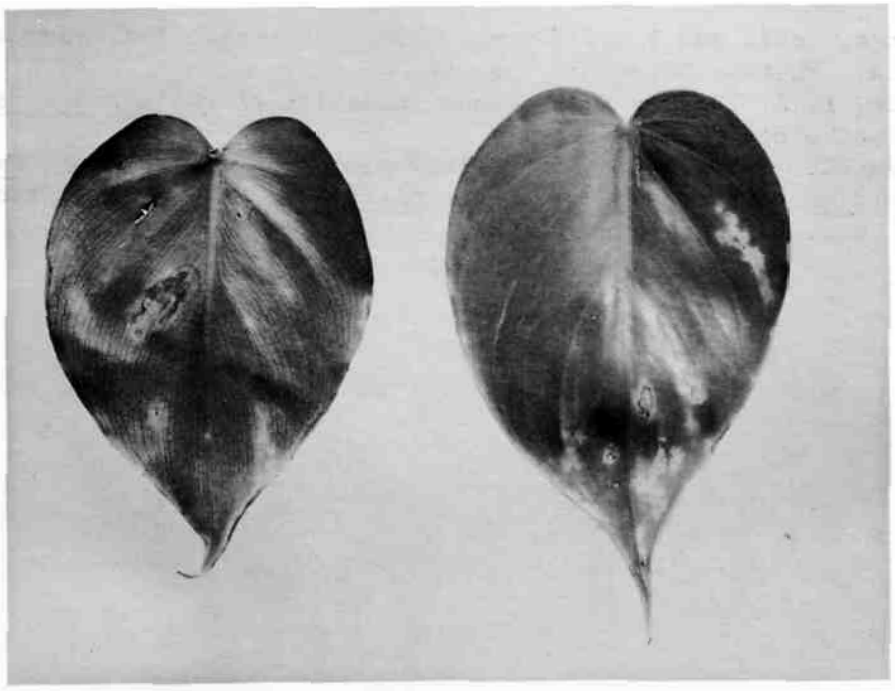

Fig. 1. Philodendron oxycardium with symptoms of leaf spot and tip burn.

THE PATHOGEN. The disease is caused by a bacterium, Xanthomonas dieffenbachiae (McCulloch and Pirone) Dowson. It was first isolated and described in 1939 from Dieffenbachia picta on which the bacterium causes more or less circular to elongated, yellow or orange-yellow leaf spots. In 1967 McFadden described the disease on Phi1odendron oxycardium and identified the pathogen as Xanthomonas sp.

Numerous isolations made from specimens received by the Division of Plant Industry in Gainesville all yielded identical yellow bacteria which were identified as X. dieffenbachiae. Furthermore, the isolates were compared with a pure culture from the International Collection of Phytopathogenic Bacteria and proved to be identical.

All isolates, including the one from the International Collection, produced typical symptoms when leaves of Philodendron oxycardium were inoculated.

CONTROL. High humidity favors the development of the disease and crowded conditions facilitate the spread of the pathogen from one plant to the other. In rooting beds and in beds with stock plants, crowding cannot be avoided but every means should be taken to reduce the frequency of overhead sprinklings to a minimum while still retaining favorable conditions for plant growth. Apart from these indirect control measures, one or two applications of Agristrep (100 ppm streptomycin, applied at a 7 to 10 day interval) should be adequate for the protection of newly-formed leaves.

Literature Cited

1. McCulloch, Lucia and P. P. Pirone. 1939. Bacterial leaf spot of Dieffenbachia. Phytopathology 29:956-962.
2. McFadden, L. A. 1967. A Xanthomonas infection of Philodendron oxycardium. Phytopathology 57:343 (Abstr.)
3. Wehlburg, C. 1968. Bacterial leaf spot and tip burn of Philodendron oxycardium caused by Xanthomonas dieffenbachiae. Proc. Florida State Hort. Soc. 81: (In press).